

From: ["Ferguson, Jaci" </O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE:GROUP \(FYDIBOHF23SPDLT\)/CN=RECIPIENTS/CN=1277EA0B673540C683C5348D7794C5C6-FERGUSON,JACI>](#)
To: [Brooks](#)
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CC: ["Tapia, Cecilia" <Tapia.Cecilia@epa.gov>](#)
Date: 4/25/2014 2:37:32 PM
Subject: FW: Draft Deliberative material: ETSC technical observations from the April 15th meeting in Bridgeton, MO

Sent to Karl as requested from Cecilia.

Jaci Ferguson

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"If you don't like something, change it.

If you can't change it, change the way you think about it."

From: McKernan, John
Sent: Friday, April 25, 2014 3:23 PM
To: Ferguson, Jaci
Subject: Draft Deliberative material: ETSC technical observations from the April 15th meeting in Bridgeton, MO

Draft Deliberative

Hi Jaci-

Below is the language from the communication I sent to Ron, Cecilia and Dan earlier today. I hope this is helpful.

Thank you,

John

Ron, Cecilia and Dan-

Thank you for the opportunity to participate in the PRP, EPA and Missouri Department of Natural Resources meeting held at Republic Services' office in Bridgeton, MO on 4/15/2014. Based on what was discussed at the meeting, we are providing the following technical observations to assist Region 7 in their Engineering Technical Support Center (ETSC) request:

1. Only three isolation barrier options were presented by the PRP. There may be other equally or more suitable options for the Region to consider that were not presented.
2. The PRP has not yet established the location of a suitable 'clean' alignment location (no RIM detections between OU-1 Area 1 and the North Quarry cell of Bridgeton landfill)
 - a. To ensure that any option would be effective, it is first necessary to determine a 'clean' alignment.
 - b. The GCPT and related coring data collected by the PRP to date are insufficient to identify a 'clean' alignment location. Additional data would be needed.
 - c. A proposed alignment located along or near the edge of the OU-1 Area 1 shallow 'shelf' was discussed to minimize the potential of encountering RIM.
 - d. The required depth of the barrier and associated removal of material would be challenging if a 'clean' alignment is located within the deeper area (~130 ft.) of the North Quarry cell of Bridgeton landfill.
3. We are not aware of any public or peer-reviewed documents that demonstrate the effectiveness of the three options presented to contain an SSE.
4. A technical review of a specific option would require access to planned design specifications for all isolation barrier options provided by the PRP.
 - a. The options presented were described as being part of a larger response plan that would be enacted should an SSE develop in the vicinity of OU-1 Area 1, however no response plans were presented at the meeting.
 - b. In addition, the options proposed by the PRP in the meeting did not address operations or long-term care (maintenance) plans.
5. The Region, in concert with the state of Missouri, would benefit from a meeting with the St. Louis airport authority and/or the FAA regarding all options proposed by the PRP, to consider any restrictions related to easements.
6. Any option that involves excavating material from OU-1 or the North Quarry has associated risks. Factors may include gas release, potential high heat of subsurface materials, and/or geotechnical instability.
7. If gas wells along the north edge of the north Bridgeton MSW landfill cell are penetrating underlying OU-1 fill at depth, it may be advisable for the Region to ask that the screening depths of these wells be raised, so that the potential of venting gasses from the underlying OU-1 material is minimized.

Thank you again for the opportunity to participate in the meeting, and provide observations. Please feel free to contact me with any questions or comments.

Best regards,

John McKernan, ScD, CIH
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